Unit 1 In Class Assignment

Due: Wednesday, March 23, 2016

1. What is the domain of the reciprocal function of f(x)=5x+1
2. Identify the holes in the graph $g(x)=\frac{x+7}{7x+49}$
3. Identify the vertical and horizontal asymptotes of $h(x)=\frac{x-4}{2x+1}$
4. Find the x and y-intercepts of $m(x)=\frac{18}{3x+2}$
5. Find any vertical asymptotes of $n(x)=\frac{x^2-25}{x^2+4x-5}$
6. Solve $\frac{x+4}{x+3}=\frac{2x+5}{x+2}$
7. Solve $\frac{x+4}{x-3}\geq\frac{2x+5}{x-2}$
8. Graph $n(x)=\frac{x^2-25}{x^2+4x-5}$
9. Write a rational equation that cannot have 3 or -5 as solutions
10. Solve $3x^4-5x^2-90\geq 2x^4+x^3+30x^2-57x-180$

Evaluation Rubric

Criteria	R Insufficient	Level 1 Limited	Level 2 Approaching	Level 3 Sufficient	Level 4 Thorough Sophisticated
Knowledge and Understanding					
Understanding of content and concepts Procedural **accuracy**	**Insufficient understanding** of content and concepts.	**Simplistic understanding** of content and concepts. Many conceptual gaps or errors. Mathematics contains **many** procedural **errors**	**Basic understanding** of content and concepts. Some conceptual gaps or errors Execution of mathematics contains **some** procedural **errors**.	**Sufficient understanding** of content and concepts. Rare conceptual gaps or errors. Mathematics may contain a **few** procedural **errors**	**Insightful understanding** of content and concepts. No significant conceptual errors Mathematics may contain **insignificant** or rare procedural **errors**
Communication					
Expression and **organization** of ideas and mathematical thinking	Solution **unorganized**. **Insufficient** use of correct mathematical vocabulary, symbols, labels, and conventions.	**Organization** of mathematics **poor**. Uses **common language** in place of mathematical vocabulary. Sometimes uses symbols, labels, and conventions correctly.	**Organization** of mathematics **satisfactory**. **Few errors** in vocabulary and only some common language in place of mathematical vocabulary. Usually uses mathematical symbols, labels, and conventions correctly.	**Organization** of mathematics **easy to follow**. **Appropriate** use of mathematical **vocabulary**. Consistently uses mathematical symbol, labels, and conventions correctly.	**Organization** of mathematics **clear and easy to follow.** **Clear and precise** language. Insightful use of symbols and mathematical vocabulary.
Application					
Transfer of mathematical ideas to situations drawn **from other contexts**	**Insufficient transfer** of ideas to other contexts.	**Simplistic transfer** of ideas drawn from familiar contexts.	**Basic transfer** of ideas drawn from **familiar contexts**. .	**Solid transfer of ideas** drawn from **new contexts.**	Transfers ideas to other contexts and makes **unique, original**, or **insightful** connections.
Selection and **use** of tools and strategies to solve a problem	**Incorrect selection** of tools	**Selection** of appropriate tools is **limited**, with major errors, omissions or mis-sequencing.	Selects **some appropriate tools** and strategies with minor errors, omissions or mis-sequencing.	Selects **appropriate tools** and strategies accurately and in logical sequence.	Selects the **most appropriate tools** accurately and efficiently. Creates **elegant solutions**, uses multiple strategies.
Connections between **representations**	**Insufficient connections** made between different representations.	Makes **few simple connections**. Limited use of multiple representations.	Makes **few basic connections**. Basic use of multiple representations Misinterprets part(s) of the information	Makes **solid connections**. Appropriate use **of multiple representations**.	Makes **strong connections between representations.** Insightful use of multiple representations as appropriate to the problem.
Reasoning with justification.	**Insufficient evidence** of reasoning.	**Simplistic reasoning** with weak justification and possible **generalizations.**	**Basic** evidence of **reasoning** with **minor errors in justification** and possible **generalizations**	**Reasoning of familiar situations** with justification and **some generalizations**.	**Sophisticated** mathematical reasoning with **strong justification and generalizations**